Tuberculous Colitis

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Abstract

Intestinal tuberculosis is rare and can be difficult to diagnose because the clinical symptoms and diagnostic results are nonspecific. Differentiating between intestinal TB and other etiologies of inflammation is critical since instituting the appropriate therapeutic regimen early can be life saving. We report herein a case of pathologically proven tuberculous colitis in a 21-year-old male. The presentation, diagnosis, and management are discussed.

Report of a Case

A 21-year-old Kenyan male presented with fever, weight loss, and progressively worsening, nonradiating, right lower quadrant pain. He reported two episodes of nonbilious emesis, without previous change in appetite or bowel habits. His past medical and surgical history were unremarkable. On physical examination, he reported tenderness in the right lower quadrant without rebound or guarding. Routine laboratory studies were normal. Stool studies showed no Clostridium difficile toxin, no ova or parasites, and negative culture. Serum Entamoeba histolytica IgG antibody was negative.

An abdominal CT scan (Fig. 1) showed no evidence of bowel obstruction or free air suggesting perforation. There was marked mural thickening involving the ascending colon and hepatic flexure of the colon, with moderate surrounding inflammatory change. Medial to the colon, there appeared to be a loculated, septated collection with the more anterior component measuring 3.4 x 3.0 cm and the more posterior component measuring 3.7 x 2.9 cm. There was a contrast-filled appendix. Differential diagnosis would include inflammatory bowel disease, infectious colitis, or less likely ischemia.

The patient was admitted for further work up, bowel rest, and intravenous fluid resuscitation. After consultation with interventional radiology, a decision was made to proceed with percutaneous drainage of the fluid collection.

Fluid analysis showed a negative aerobic/anaerobic culture and fungal culture. Many acid fast bacilli were seen. Serum Quantiferon-TB gold test was consistent with infection with Mycobacterium tuberculosis (TB).

Possible causes for immunocompromise were investigated after the patient denied contact with anyone who exhibited TB symptomatology. HIV-1/2 antibody was positive and absolute CD4 count was 12 /µL. Standard 4-drug antituberculous therapy was initiated for a 6-month course.

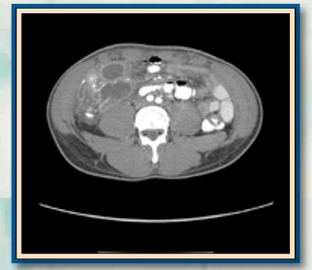

Figure 1. Abdominal CT scan, axial view showing mural thickening involving the ascending colon.

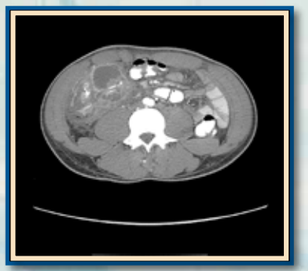

Figure 2. Abdominal CT scan, axial view showing loculated, septated collection abutting the ileocecal area.

Discussion

The most common clinical presenting symptoms and physical examination findings, radiological features, and histological findings in patients with tuberculous colitis are nonspecific and indistinguishable from other etiologies of inflammatory bowel disease, most notably Crohn's disease. Typically, affected patients present with abdominal pain, fever, and weight loss[1,2].

Classical findings attributable to TB—such as lymphadenopathy, a positive tuberculin skin test (TST), or a chest radiograph that indicates either active or old pulmonary disease—may only be present in up to 64% of cases. Hence, unless a high index of suspicion is maintained, the diagnosis can be missed or delayed resulting in increased morbidity and mortality. Only 15-20% of patients have concomitant active pulmonary tuberculosis. Despite this, a chest radiograph should be obtained on every patient in whom the diagnosis of TB is considered[3].

Immigrants and AIDS patients are two population groups at particular risk for abdominal tuberculosis in this country; the urban poor and the elderly are also at risk. The most common sites of tuberculous involvement of the GI tract are the ileocecal area, the ileum, and the colon, although any area of the gut can be involved. This tropism is thought to be due to the relative physiologic stasis in this area and the increased density of lymphatic tissue, for which the bacilli have an affinity[4-6].

Abdominal CT scan is the most useful diagnostic imaging study. Findings of ascites, omental and mesenteric thickening, luminal irregularities of the bowel mucosa, massive lymphadenopathy, and masses involving the liver, spleen, and/or pancreas can all be demonstrated. Although CT scan may be useful in making the diagnosis, definitive diagnosis is made only by tissue analysis. Other clues to the diagnosis include normal white blood cell count, mild anemia, transaminase abnormalities with disproportionately elevated AP over bilirubin, and evidence of malnutrition[6-7].

Gastrointestinal tuberculosis is treated with antituberculous drugs. Surgery is reserved for complications or uncertainty in diagnosis. The length of treatment was based on symptom and radiographic resolution, bacteriology, the presence of HIV infection, disseminated disease, and the presence of drug malabsorption. Six-, 9-, and 18- to 24-month regimens are all effective for extrapulmonary tuberculosis. Standard therapy of at least 9 months duration is also effective in most AIDS patients who are started on appropriate treatment in a timely fashion and who are compliant. The potential for multidrug resistance needs to be kept in mind[8-10].

In summary, gastrointestinal tuberculosis is a disease that is frequently overlooked with consequent delay in treatment. As a treatable disorder, gastrointestinal tuberculosis should be considered early in the differential diagnosis of abdominal symptoms. Failure to recognize this disease early may lead to increased morbidity and mortality.

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